

What is claimed is:

- 1     1.     A method for use in a wireless communications network, comprising:  
2             in a reverse wireless link, communicating information relating to status of a  
3     buffer in a mobile station; and  
4             in the reverse wireless link, communicating information relating to a data rate  
5     used by the mobile station when transmitting over the reverse wireless link.
- 1     2.     The method of claim 1, wherein communicating information relating to the  
2     status of the buffer comprises communicating information relating to an occupancy of  
3     a data buffer.
- 1     3.     The method of claim 1, wherein communicating information relating to the  
2     data rate comprises communicating information relating to a maximum data rate  
3     supportable by the mobile station over the reverse wireless link.
- 1     4.     The method of claim 3, wherein communicating the maximum data rate  
2     supportable by the mobile station comprises communicating a traffic-to-pilot ratio to  
3     indicate the maximum data rate supportable by the mobile station.
- 1     5.     The method of claim 1, further comprising detecting whether a trigger  
2     condition has occurred,  
3             wherein communicating the information relating to the status of the buffer and  
4     the information relating to the data rate is performed in response to occurrence of the  
5     trigger condition.
- 1     6.     The method of claim 5, wherein detecting whether the trigger condition has  
2     occurred comprises detecting whether one of plural trigger conditions has occurred.
- 1     7.     The method of claim 6, wherein detecting whether one of plural trigger  
2     conditions has occurred comprises detecting for the following condition: a maximum  
3     time duration has elapsed, and a buffer to contain data to transmit over the reverse  
4     wireless link is not empty.

1 8. The method of claim 7, wherein detecting whether one of plural trigger  
2 conditions has occurred comprises detecting for the following condition: a minimum  
3 time duration has elapsed, and a buffer to contain data to transmit over the reverse  
4 wireless link is not empty.

1 9. The method of claim 8, wherein detecting whether one of plural trigger  
2 conditions has occurred comprises detecting for the following condition: a current  
3 power headroom differs from a previous power headroom by greater than a  
4 predetermined amount, a predetermined time duration has elapsed from a time when  
5 information relating to a status of a buffer in the mobile station and information  
6 relating to a data rate over the reverse wireless link was last sent, and a buffer to store  
7 data for transmission over the reverse wireless link is not empty.

1 10. The method of claim 1, wherein communicating the information relating to a  
2 status of a buffer in the mobile station and information relating to a data rate over the  
3 reverse wireless link comprises communicating the information relating to the status  
4 of the buffer and information relating to the data rate in a reverse request message.

1 11. The method of claim 10, wherein communicating the reverse request message  
2 comprises communicating the reverse request message on a reverse request channel  
3 (R-REQCH).

1 12. The method of claim 11, wherein communicating the reverse request message  
2 comprises communicating the reverse request message containing a first field to  
3 represent a maximum traffic-to-pilot ratio, and a second field to represent a buffer  
4 status.

1 13. The method of claim 12, wherein communicating the reverse request message  
2 comprises communicating the reverse request message containing a third field having  
3 an identifier to represent at least one of a service instance and a service class  
4 associated with the reverse request message.

- 1    14.    An article comprising at least one storage medium containing instructions that  
2    when executed cause a system in a wireless communications network to:  
3            communicate, in a reverse wireless link, a message having at least two fields  
4    that contain information indicative of a data rate for transmission by a mobile station  
5    in the reverse wireless link, the information based at least on one of buffer occupancy  
6    and power headroom.
- 1    15.    The article of claim 14, wherein communicating the message in the reverse  
2    wireless link comprises communicating a message having a first field containing data  
3    rate information and a second field for indicating whether the data rate information in  
4    the first field is based on buffer occupancy or power headroom.
- 1    16.    The article of claim 14, wherein communicating the message in the reverse  
2    wireless link comprises communicating a message having a first field containing  
3    power-related data rate information and a second field containing buffer-related data  
4    rate information.
- 1    17.    The article of claim 14, wherein communicating the message in the reverse  
2    wireless link comprises communicating a message having a first field containing  
3    power-related data rate information and a second field containing buffer occupancy  
4    information.
- 1    18.    The article of claim 14, wherein communicating the message in the reverse  
2    wireless link comprises communicating a message having a first field containing  
3    traffic-to-pilot ratio information, a second field containing buffer occupancy  
4    information, and a third field containing an identifier of at least one of a service  
5    instance and a service class associated with the buffer occupancy information.
- 1    19.    The article of claim 14, wherein communicating the message in the reverse  
2    wireless link comprises communicating a reverse request message on a code-division  
3    multiple access (CDMA) 2000 reverse request channel (R-REQCH).

- 1   20.    A mobile station comprising:  
2           an interface to communicate with a base station over a wireless link;  
3           a buffer to store data for communication over the wireless link to the base  
4   station; and  
5           a controller to send information relating to a status of the buffer and  
6   information relating to a data rate over the wireless link to the base station.
  
- 1   21.    The mobile station of claim 20, wherein the controller is adapted to send data  
2   in the buffer on a reverse packet data channel (R-PDCH).
  
- 1   22.    The mobile station of claim 21, wherein the controller is adapted to send the  
2   information relating to the status of the buffer and information relating to the data rate  
3   over the wireless link in a reverse request message on a reverse request channel (R-  
4   REQCH).
  
- 1   23.    The mobile station of claim 22, wherein R-REQCH is a code-division multiple  
2   access (CDMA) 2000 R-REQCH.